

AEGA LEPTONICA, A NEW SPECIES OF AEGID
ISOPOD CRUSTACEAN FROM THE TROPICAL
WESTERN ATLANTIC, WITH NOTES ON
ROCINELA OCULATA HARGER AND
ROCINELA KAPALA, NEW SPECIES

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Abstract.—*Aega leptonica*, n. sp. is described and figured. The status and distribution of *Rocinela oculata* is reviewed and a new name, *Rocinela kapala*, is provided for Australian material previously identified as *R. oculata*. Remarks are given on the presence of the mandibular molar process in aegids, and the mouthparts of the family are rediagnosed.

The Aegidae of the United States have been little studied, the only major work since Richardson's (1905) monograph being that of Brusca (1983) on the East Pacific *Aega* species. The only recent new record of Atlantic aegids was of *Aega monophthalma* Johnston (Treat 1980).

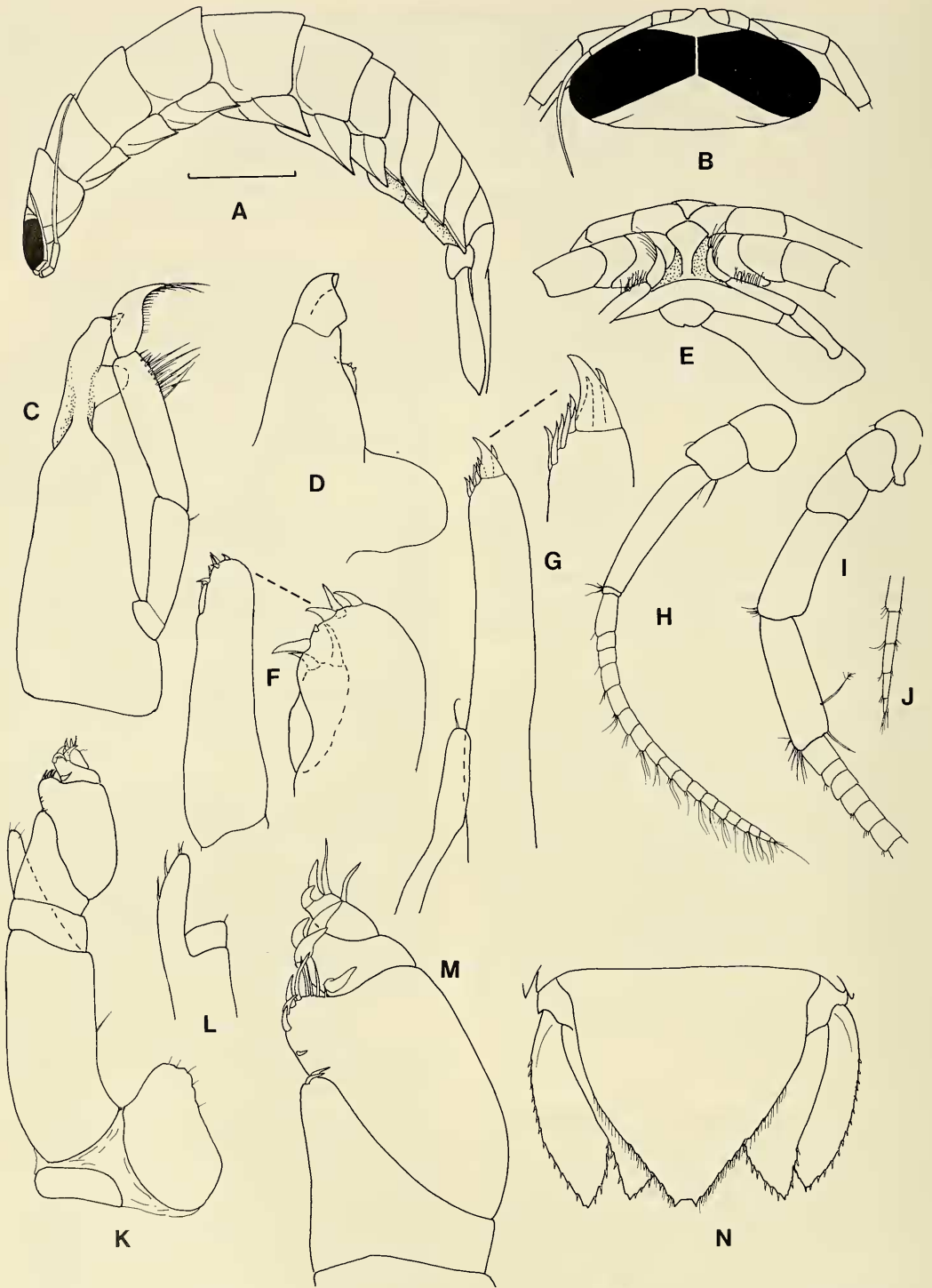
While examining collections at the Smithsonian I came across a new species of *Aega*, and also material identified as *Rocinela oculata*. This Atlantic material, identified as *R. oculata*, proved not to belong to that species, but also led to a re-evaluation of the status of Australian material identified as *R. oculata*, which is here described as a new species. The following abbreviations are used: AM—Australian Museum; NSW—New South Wales, Australia; USNM—U.S. National Museum of Natural History, Smithsonian Institution; QM—Queensland Museum.

Mouthpart Morphology of the Aegidae

Some confusion over the presence or absence of the mandibular molar process in the Aegidae has appeared in recent literature. Brusca (1983), in his diagnosis to the family, stated "mandible without lacinia mobilis, spine row, or molar process." This was later repeated by Brusca and Iverson

(1985), and Bowman (1986) stated that the aegid mandible lacked the molar process. This seems to be due to a misinterpretation of Brusca's (1983) figs. That the family Aegidae possess a molar process has been amply demonstrated, most notably by Hansen (1890) who figured it for *Barybrottes agilis* (plate 9, fig. 3f), *Aega psora* (plate 9, fig. 4c, d) and *Rocinela danmoniensis* (plate 10, fig. 1b-e). The figs. for *Aega vigilans*, *A. laevis*, *A. lethrina*, *A. coroo*, *A. beri*, *Rocinela oculata* and *Alitropus typus* given by Bruce (1983) all show a molar process on the mandible. The molar process of *Aega vigilans* has small spines on the anterior margin. *Aega leptonica* described herein retains a very reduced spine row, also noted in other aegids by Hansen (1890).

There are several other aspects of mouthpart morphology frequently not noted. The mandible palp has 4 articles, the proximal one often fused to the second, also figured by Hansen (1890). The maxilla is made up of two articles, the large one usually termed lateral lobe, to which is attached the very much smaller medial lobe (there is never a basal lobe with two distinct terminal lobes as figured by Brusca (1983), this appearing to be an artifact caused by folding under a slide coverslip). The maxilla is essentially the same as that of the Cymothoidae. The



maxillule is nearly always figured without a medial lobe, but in *Aega leptonica* this small lobe is present.

The maxilliped of *Aega* has an article often not figured. This article is the coxa, the article lateral to it is the epipod as figured and identified by Hansen (1890), and not part of a divided coxa. In males the epipod may be small, or with a few marginal setae; in females the maxilliped develops large laminar lobes, one from the basis and one from the coxa.

The mouthparts of the Aegidae are here rediagnosed: Mandible incisor narrow, molar process present, lacinia mobilis and spine row (usually) absent; palp of 3 or 4 articles, articles 1 and 2 often coalesced. Maxillule slender, styliform with terminal spines. Maxilla with 2 articles, small distomedial lobe joined to larger lateral lobe, each lobe with 2 or more apical spines. Maxilliped with endite and epipod; palp with 3–5 articles, at least articles 3 and 4 with large hooked spines.

Aega leptonica, new species

Figs. 1, 2

Material.—Female Holotype, 28.5 mm, off Tortugas, Florida, 30 Jul 1932, 1048 m, *Fish Hawk* sta 65–32 (USNM 227124).

Type locality.—Off Dry Tortugas, Florida, U.S.A., ca. 24°00'N, 83°00'W.

Description.—Body about 3 times as long as wide. Cephalon with median rostrum; eyes large, united, medially occupying about 0.25 length of cephalon. Pereonites 4–7 with partial transverse impressed line. Coxae becoming more acute posteriorly; all coxae with oblique carina. Pleonites all visible; pleonites 1–4 each with horizontal carina.

Pleotelson slightly wider than long, lateral margins convex, converging to narrow apex; each margin with 6 large spines and marginal setae; apex with subrectangular excision, lateral margins of which diverge.

Antennule peduncle article 3 longest, exceeding combined lengths of articles 1 and 2; peduncle article 4 fused to 3; flagellum with 17 articles, extending to middle of pereonite 1. Antenna peduncles articles 1–3 short; 4 and 5 about equal in length, each longer more than twice as long as article 3; flagellum with 27 articles, extending to anterior to pereonite 3.

Frontal lamina approximately pentagonal, posterior part stem-like; anterior margins slightly convex. Mandible incisor truncate; molar process prominent, vestigial spine row present; palp 4 articulated, article 1 short, fused to article 2, distolateral margin of article 3 and most of lateral margin of article 4 with stiff setae. Maxillule with 1 broad-based triangular spine and 8 slender spines. Maxilla with 2 gently curved spines on endopod, exopod with 3 large curved spines, 1 curved and 1 straight spine. Maxilliped palp medial margins with 2 slender spines at distal angle of article 2, 5 spines and 4 setae on article 3, 4 large recurved spines on article 4, and 2 curved spines and 2 setae on article 5; endite with 4 setae.

Pereopods all slender. Pereopods 1–3 with slender propodus and elongate dactylus which exceeds length of propodus; 2 small spines on posterior margin of carpus, 1 small spine on posterior margin of merus, 1 small spine on anterodistal angle of ischium. Pereopods 2 and 3 with more numerous and larger spines than pereopod 1. Pereopod 7 basis with evenly spaced setae along anteromedial margin; posterior margins of is-

Fig. 1. *Aega leptonica*, holotype: A, Lateral view; B, Cephalon; C, Mandible; D, Mandible, detail; E, Clypeal region; F, maxilla and detail; G, maxillule and detail; H, Antennule; I, Antenna; J, Antennal flagellum, distal articles; K, Maxilliped; L, Maxilliped endite; M, Maxilliped palp; N, Pleotelson and uropods. Scale bar represents 5 mm.

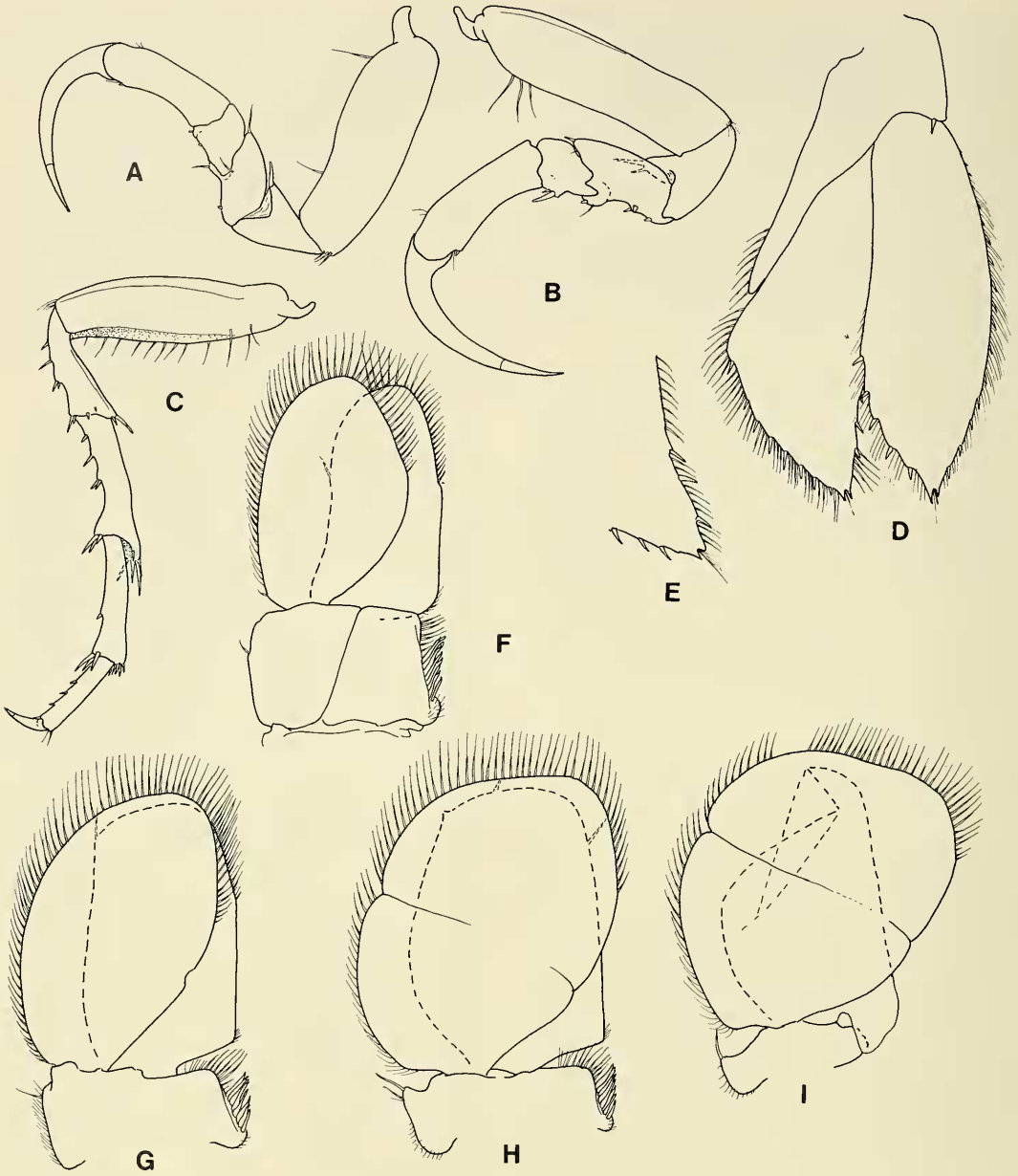


Fig. 2. *Aega leptonica*, holotype: A, Pereopod 1; B, Pereopod 2; C, Pereopod 7; D, Left uropod, ventral view; E, Right uropod, endopod apex, dorsal view; F-I, Pleopods 1-3, 5 respectively.

chium and merus indented, each indentation with spines as well as spines at distal angles; carpus with 1 spine on posterior margin; propodus with 3 spines on posterior margin.

Pleopods with only endopod of pleopod 5 naked; endopods of pleopods 3 and 4 with setae only on distomedial margin; endopods 3-5 with small acute process on mediolateral angle. Peduncle of pleopod 1 with 9 cou-

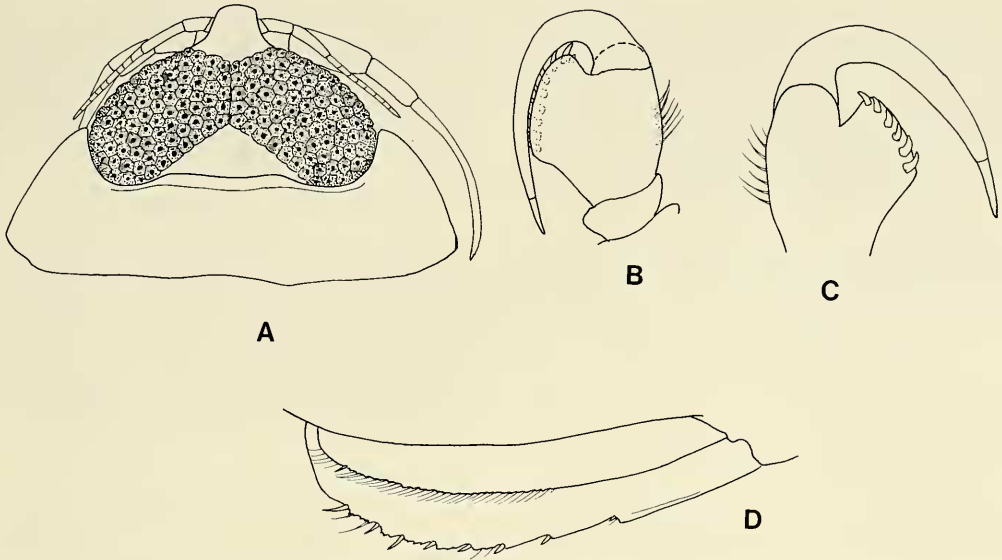


Fig. 3. *Rocinela oculata*, holotype. A, Dorsal view of cephalon; B, Propodal palm, pereopod 1; C, Propodal palm of pereopod 2; D, Lateral margins of right uropodal rami.

pling hooks decreasing to 7 on peduncle 4. Uropods extending to apex of pleotelson, rami about equal in length. Exopod lateral margin convex, with 15–16 marginal spines and continuous marginal setae, medial margin with 5 spines and continuous marginal setae. Endopod lateral margin sinuate, with continuous marginal setae and three spines; medial margin with continuous marginal setae and 8 spines; apices of both rami bifid.

Male.—Not known.

Color.—On collection label: “Pink on posterior three somites . . . eyes chestnut.”

Remarks.—The shape of the pleotelson, medially united eyes, and slender anterior pereopods readily identify this species. *Aega leptonica* is most similar to those species which have a prominently excised pleotelson apex: *Aega beri* Bruce, and *Aega quadratisinus* Richardson. Characters common to all three species include antennule, antennal, clypeal, pereopodal, pleopodal and uropod morphology. *Aega leptonica* differs from those two species in having medially united eyes, and more slender anterior pereopods.

The similar species *Aega excisa* Schioedte & Meinert, 1879, differs in having smoothly convex pleotelson lateral margins, and the pleotelson excision is V-shaped, not rectangular.

Etymology.—The specific epithet is derived from combining the Greek words *leptos* (slender, thin) and *onychos* (talon or claw).

Rocinela oculata Harger

Fig. 3

Rocinela oculata Harger, 1883:97, pl. III, figs. 2–2a, pl. IV, fig. 1.—Richardson, 1898:9; 1900:219; 1901:523; 1904:34, 35; 1905:191, fig. 195.—Schultz, 1969:199, fig. 314.

Not *Rocinela oculata*.—Bruce, 1983:778, figs. 15, 16 (= *Rocinela kapala*, new species).

Material.—Holotype, immature (13.3 mm), off Georgia, U.S.A. (MCZ 3910).

Remarks.—The single specimen is too fragile to allow dissection, but additional figures of appendages in situ are given.

Material in the Smithsonian collections from the Caribbean and Florida identified as *R. oculata* (USNM 7513, USNM 90440) are not that species, the morphology and spination of pereopods 1 to 3 being incompatible with Harger's holotype. This material appears to be an undescribed species of *Rocinela*.

Distribution.—Known only from the type locality, off Georgia, U.S.A.

Rocinela kapala, new species

Rocinela oculata.—Bruce, 1983:778, figs. 15, 16 (not *R. oculata* Harger, 1883).

Material.—HOLOTYPE male (41.5 mm), east of Clarence River mouth, NSW, Australia, 29°25.2'S, 153°49.5'E, 12 Oct 1975, 450 m, coll. NSW State Fisheries on F.R.V. *Kapala* (AM P31740) (specimen figured by Bruce 1983). PARATYPES. 4 males, 2 females, same data as holotype (AM P31705). Other paratypes detailed by Bruce (1983) AM P17950, P21014, P31704, QM W10464.

New records.—Male (36.0 mm), female (48.0 mm), off Sydney, NSW, 33°47'S, 151°58'E, 6 Dec 1972, 765 m (AM P37143); male (48.0 mm), off Sydney, NSW, 33°42'S, 151°57'E, 25 Sep 1984, 632 m (AM P37142); female (41.0 mm) off Clarence River, NSW, 29°46'S, 153°42'E, 26 Apr 1978, 405 m (AM P37141); all coll. NSW State Fisheries, FRV *Kapala*.

Remarks.—This material was described in detail by Bruce (1983) and identified as *R. oculata*. Under remarks Bruce (1983) commented that specificity of Australian and western Atlantic material would only be confirmed by examination of adult specimens of *R. oculata* from off the U.S.A.

Re-examination of the holotype of *R. oculata* showed that the two populations cannot be considered conspecific, and the Australian species is here named as new.

Rocinela kapala can easily be distinguished from *R. oculata* by: shorter, anteriorly rounded rostrum; pereopods 1 to 3

with palm less produced, posterior margin convex; pereopods 4–7 less spinose; peronites 4 to 7 become elongated in adults.

Etymology.—Named after the New South Wales Fisheries vessel, FRV *Kapala*.

Acknowledgments

This initial part of this study was carried out while in receipt of a Smithsonian Post-doctoral Fellowship (1984) and completed while in receipt of a Queen's Fellowship in Marine Science. The Australian Museum is gratefully acknowledged for provision of facilities.

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